

WEST[Help](#) [Logout](#)
[Main Menu](#) | [Search Form](#) | [Posting Counts](#) | [Show S Numbers](#) | [Edit S Numbers](#)
Search Results -

Term	Documents
GODOWSKI	170
GODOWSKIS	0
P	2837735
PS	47367
L.DWPI,EPAB,JPAB,USPT.	1896386
LS.DWPI,EPAB,JPAB,USPT.	104441
(GODOWSKI ADJ P) ADJ (L.IN.)	0

Database: [All Databases \(USPT + EPAB + JPAB + DWPI + TDBD\)](#) ▾

godowski p l.in.

Refine Search:

Search History

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
ALL	godowski p l.in.	0	<u>L6</u>
ALL	immunoadhesin and neur\$ and growth and egf	36	<u>L5</u>
ALL	immunoadhesin and neur\$ and growth	98	<u>L4</u>
ALL	immunoadhesin and neur\$	100	<u>L3</u>
ALL	immunoadhesin	163	<u>L2</u>
ALL	immunoadhensin	0	<u>L1</u>

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
ALL	immunoadhesin and neur\$ and growth and egf	36	<u>L5</u>
ALL	immunoadhesin and neur\$ and growth	98	<u>L4</u>
ALL	immunoadhesin and neur\$	100	<u>L3</u>
ALL	immunoadhesin	163	<u>L2</u>
ALL	immunoadhensin	0	<u>L1</u>

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Your wildcard search against 2000 terms has yielded the results below

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Term	Documents
IMMUNOADHESIN	116
IMMUNOADHESINS	117
NEUR\$	0
NEUR	172
NEURA	30
NEURAANN	1
NEURAVIDIN	1
NEURABIN	1
NEURACHEM	3
NEURACTIV	1
(IMMUNOADHESIN AND NEUR\$ AND GROWTH AND EGF).ALL.	36

[There are more results than shown above, click here to view the entire set.](#)Database: [All Databases \(USPT + EPAB + JPAB + DWPI + TDBD\)](#) ▾immunoadhesin and neur\$ and growth and
egf ▾

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Your wildcard search against 2000 terms has yielded the results below

Search for additional matches among the next 2000 terms

Search Results - Record(s) 1 through 10 of 36 returned.**1. Document ID: US 5955420 A**

Entry 1 of 36

File: USPT

Sep 21, 1999

US-PAT-NO: 5955420
DOCUMENT-IDENTIFIER: US 5955420 A
TITLE: Rse receptor activation

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)**2. Document ID: US 5914237 A**

Entry 2 of 36

File: USPT

Jun 22, 1999

US-PAT-NO: 5914237
DOCUMENT-IDENTIFIER: US 5914237 A
TITLE: Kinase receptor activation assay

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)**3. Document ID: US 5891650 A**

Entry 3 of 36

File: USPT

Apr 6, 1999

US-PAT-NO: 5891650
DOCUMENT-IDENTIFIER: US 5891650 A
TITLE: Kinase receptor activation assay

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)**4. Document ID: US 5871753 A**

Entry 4 of 36

File: USPT

Feb 16, 1999

US-PAT-NO: 5871753
DOCUMENT-IDENTIFIER: US 5871753 A
TITLE: Regulated transcription of targeted genes and other biological events

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)

5. Document ID: US 5869337 A

Entry 5 of 36

File: USPT

Feb 9, 1999

US-PAT-NO: 5869337

DOCUMENT-IDENTIFIER: US 5869337 A

TITLE: Regulated transcription of targeted genes and other biological events

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KMC](#)[Image](#)

6. Document ID: US 5864020 A

Entry 6 of 36

File: USPT

Jan 26, 1999

US-PAT-NO: 5864020

DOCUMENT-IDENTIFIER: US 5864020 A

TITLE: HTK ligand

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KMC](#)[Image](#)

7. Document ID: US 5821333 A

Entry 7 of 36

File: USPT

Oct 13, 1998

US-PAT-NO: 5821333

DOCUMENT-IDENTIFIER: US 5821333 A

TITLE: Method for making heteromultimeric polypeptides

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KMC](#)[Image](#)

8. Document ID: US 5830462 A

Entry 8 of 36

File: USPT

Nov 3, 1998

US-PAT-NO: 5830462

DOCUMENT-IDENTIFIER: US 5830462 A

TITLE: Regulated transcription of targeted genes and other biological events

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KMC](#)[Image](#)

9. Document ID: US 5834266 A

Entry 9 of 36

File: USPT

Nov 10, 1998

US-PAT-NO: 5834266

DOCUMENT-IDENTIFIER: US 5834266 A

TITLE: Regulated apoptosis

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KMC](#)[Image](#)

10. Document ID: US 5807706 A

Entry 10 of 36

File: USPT

Sep 15, 1998

US-PAT-NO: 5807706

DOCUMENT-IDENTIFIER: US 5807706 A

TITLE: Method for making heteromultimeric polypeptides

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KMC](#)[Image](#)

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Search Results - Record(s) 21 through 30 of 36 returned.**21. Document ID: US 5714147 A**

Entry 21 of 36

File: USPT

Feb 3, 1998

US-PAT-NO: 5714147
DOCUMENT-IDENTIFIER: US 5714147 A
TITLE: Hybrid immunoglobulins

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)**22. Document ID: US 5709858 A**

Entry 22 of 36

File: USPT

Jan 20, 1998

US-PAT-NO: 5709858
DOCUMENT-IDENTIFIER: US 5709858 A
TITLE: Antibodies specific for Rse receptor protein tyrosine kinase

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)**23. Document ID: US 5705364 A**

Entry 23 of 36

File: USPT

Jan 6, 1998

US-PAT-NO: 5705364
DOCUMENT-IDENTIFIER: US 5705364 A
TITLE: Mammalian cell culture process

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)**24. Document ID: US 5684136 A**

Entry 24 of 36

File: USPT

Nov 4, 1997

US-PAT-NO: 5684136
DOCUMENT-IDENTIFIER: US 5684136 A
TITLE: Chimeric hepatocyte growth factor (HGF) ligand variants

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)

25. Document ID: US 5674704 A

Entry 25 of 36

File: USPT

Oct 7, 1997

US-PAT-NO: 5674704
DOCUMENT-IDENTIFIER: US 5674704 A
TITLE: Cytokine designated 4-IBB ligand

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KWMC](#)[Image](#)

26. Document ID: US 5667780 A

Entry 26 of 36

File: USPT

Sep 16, 1997

US-PAT-NO: 5667780
DOCUMENT-IDENTIFIER: US 5667780 A
TITLE: Antibodies to SMDF

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KWMC](#)[Image](#)

27. Document ID: US 5641750 A

Entry 27 of 36

File: USPT

Jun 24, 1997

US-PAT-NO: 5641750
DOCUMENT-IDENTIFIER: US 5641750 A
TITLE: Methods for treating photoreceptors using glial cell line-derived neurotrophic factor (GDNF) protein product

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KWMC](#)[Image](#)

28. Document ID: US 5635177 A

Entry 28 of 36

File: USPT

Jun 3, 1997

US-PAT-NO: 5635177
DOCUMENT-IDENTIFIER: US 5635177 A
TITLE: Protein tyrosine kinase agonist antibodies

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KWMC](#)[Image](#)

29. Document ID: US 5624899 A

Entry 29 of 36

File: USPT

Apr 29, 1997

US-PAT-NO: 5624899
DOCUMENT-IDENTIFIER: US 5624899 A
TITLE: Method for using Htk ligand

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KWMC](#)[Image](#)

30. Document ID: US 5514582 A

Entry 30 of 36

File: USPT

May 7, 1996

US-PAT-NO: 5514582
DOCUMENT-IDENTIFIER: US 5514582 A
TITLE: Recombinant DNA encoding hybrid immunoglobulins

[Full](#)[Title](#)[Citation](#)[Front](#)[Review](#)[Classification](#)[Date](#)[Reference](#)[Claims](#)[KWMC](#)[Image](#)

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Search Results - Record(s) 31 through 36 of 36 returned.**31. Document ID: US 5455165 A**

Entry 31 of 36

File: USPT

Oct 3, 1995

US-PAT-NO: 5455165
DOCUMENT-IDENTIFIER: US 5455165 A
TITLE: Expression vector encoding hybrid immunoglobulins

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)

32. Document ID: US 5428130 A

Entry 32 of 36

File: USPT

Jun 27, 1995

US-PAT-NO: 5428130
DOCUMENT-IDENTIFIER: US 5428130 A
TITLE: Hybrid immunoglobulins

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)

33. Document ID: US 5367056 A

Entry 33 of 36

File: USPT

Nov 22, 1994

US-PAT-NO: 5367056
DOCUMENT-IDENTIFIER: US 5367056 A
TITLE: Endothelial cell-leukocyte adhesion molecules (ELAMs) and molecules involved in leukocyte adhesion (MILAs)

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)

34. Document ID: US 5272263 A

Entry 34 of 36

File: USPT

Dec 21, 1993

US-PAT-NO: 5272263
DOCUMENT-IDENTIFIER: US 5272263 A
TITLE: DNA sequences encoding vascular cell adhesion molecules (VCAMS)

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [KWMC](#) | [Image](#)

LA English
FS Priority Journals
OS GENBANK-S76473; GENBANK-S76474; GENBANK-S76475; GENBANK-S76476
EM 199504
AB Using molecular cloning techniques, human homologs of the known members of the trk family of **neurotrophin** receptors have been cloned and sequenced. Overall, there is a high degree of similarity between the human sequences and those from other mammals; however, there are differences in splicing patterns. There are two spliced forms of the extracellular domain of trkC in the human, a finding that has not been described in other species. In contrast, fewer spliced forms were detected of the intracellular domains of human trkB and trkC than has been described in other mammals. Northern analysis and in situ hybridization experiments indicate that the human trks are expressed in a similar pattern to that described in other mammals. Expression of the trk extracellular domains as fusion proteins with IgG heavy chain yields soluble molecules that mimic intact trks in their binding specificity and affinity. These soluble chimeras block the biological activity of their cognate **neurotrophin(s)** in vitro.

=>

=> d his

(FILE 'HOME' ENTERED AT 10:57:41 ON 22 NOV 1999)

FILE 'MEDLINE' ENTERED AT 10:57:49 ON 22 NOV 1999

L1 87 S IMMUNOADHESIN#
L2 20604 S EPIDERMAL GROWTH FACTOR#
L3 0 S L1 AND L2
L4 26 S NEUREGULIN RECEPTOR#
L5 0 S L4 AND L1
L6 706508 S NEUR?
L7 5 S L1 AND L6

=> s godowski p j/au

L8 40 GODOWSKI P J/AU

=> e godowski p j/au

E1 6 GODOWSKI K C/AU
E2 5 GODOWSKI P/AU
E3 40 --> GODOWSKI P J/AU
E4 6 GODOY A/AU
E5 2 GODOY A C/AU
E6 5 GODOY A C DE/AU
E7 2 GODOY A D/AU
E8 1 GODOY A DE/AU
E9 4 GODOY A J/AU
E10 1 GODOY A M/AU
E11 4 GODOY A N DE/AU
E12 1 GODOY ARAYA B/AU

=> d his

(FILE 'HOME' ENTERED AT 10:57:41 ON 22 NOV 1999)

FILE 'MEDLINE' ENTERED AT 10:57:49 ON 22 NOV 1999

L1 87 S IMMUNOGHESIN#
L2 20604 S EPIDERMAL GROWTH FACTOR#
L3 0 S L1 AND L2
L4 26 S NEUREGULIN RECEPTOR#
L5 0 S L4 AND L1
L6 706508 S NEUR?
L7 5 S L1 AND L6
L8 40 S GODOWSKI P J/AU
 E GODOWSKI P J/AU

=> s 16 and 18

L9 7 L6 AND L8

=> display

ENTER (L9), L# OR ?:19

ENTER ANSWER NUMBER OR RANGE (1):1-7

ENTER DISPLAY FORMAT (BIB):bib,ab

L9 ANSWER 1 OF 7 MEDLINE
AN 1998238815 MEDLINE
DN 98238815
TI New branches on the **neuregulin** family tree [news].
AU Zhang D; Frantz G; **Godowski P J**
SO MOLECULAR PSYCHIATRY, (1998 Mar) 3 (2) 112-5.
 Journal code: CUM. ISSN: 1359-4184.
CY ENGLAND: United Kingdom
DT News Announcement
LA English
FS Priority Journals
EM 199809
Connection closed by remote host

Left, right, and simultaneous left and right truncation are available in the Basic Index. See HELP >FIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

=> s immunoadhesin#

L1 87 IMMUNOADHESIN#

=> s epidermal growth factor#

41296 EPIDERMAL

514820 GROWTH

1526071 FACTOR#

L2 20604 EPIDERMAL GROWTH FACTOR#
(EPIDERMAL (W) GROWTH (W) FACTOR#)

=> s l1 and l2

L3 0 L1 AND L2

=> s neuregulin receptor#

146 NEUREGULIN

450867 RECEPTOR#

L4 26 NEUREGULIN RECEPTOR#
(NEUREGULIN (W) RECEPTOR#)

=> s l4 and l1

L5 0 L4 AND L1

=> s neur?

L6 706508 NEUR?

=> s l1 and l6

L7 5 L1 AND L6

-> display

ENTER (L7), L# OR ?:17

ENTER ANSWER NUMBER OR RANGE (1):1-7

ENTER DISPLAY FORMAT (BIB):bib,ab

L7 ANSWER 1 OF 5 MEDLINE

AN 1999255641 MEDLINE

DN 99255641

TI Effects of BDNF and NT-3 on development of Ia/motoneuron functional connectivity in neonatal rats.

AU Seebach B S; Arvanov V; Mendell L M

CS Department of Neurobiology and Behaviour, State University of New York at Stony Brook, Stony Brook, New York 11794-5230, USA.

NC R01 NS-16996 (NINDS)

R01 NS-32264 (NINDS)

P01 NS-14899 (NINDS)

SO JOURNAL OF NEUROPHYSIOLOGY, (1999 May) 81 (5) 2398-405.

Journal code: JC7. ISSN: 0022-3077.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Priority Journals
EM 199908
EW 19990803

AB Effects of BDNF and NT-3 on development of Ia/motoneuron functional connectivity in neonatal rats. The effects of **neurotrophin** administration and **neurotrophin** removal via administration of tyrosine kinase (trk) **immunoadhesins** (trk receptor extracellular domains fused with IgG heavy chain) on the development of segmental reflexes were studied in neonatal rats. Brain derived **neurotrophic** factor (BDNF), **neurotrophin-3** (NT-3), trkB-IgG, and trkC-IgG were delivered via subcutaneous injection on days 0, 2, 4, and 6 of postnatal life. Electrophysiological analysis of EPSPs recorded intracellularly in L5 motoneurons in response to stimulation of dorsal root L5 was carried out on postnatal day 8 in the *in vitro* hemisected spinal cord. Treatment with BDNF resulted in smaller monosynaptic EPSPs with longer latency than those in controls. EPSP amplitude became significantly larger when BDNF was sequestered with trkB-IgG, suggesting that BDNF has a tonic action on the development of this synapse in neonates. Treatment with NT-3 resulted in larger EPSPs, but the decrease noted after administration of trkC-IgG was not significant. **Neurotrophins** had little effect on the response to high-frequency dorsal root stimulation or on motoneuron properties. Polysynaptic components were exaggerated in BDNF-treated rats and reduced after NT-3 compared with controls. As in control neonates the largest monosynaptic EPSPs in NT-3 and trkB-IgG-treated preparations were observed in motoneurons with relatively large values of rheobase, probably those that are growing the most rapidly. We conclude that supplementary NT-3 and

BDNF administered to neonates can influence developing Ia/motoneuron synapses in the spinal cord but with opposite net effects.

L7 ANSWER 2 OF 5 MEDLINE
AN 1999051053 MEDLINE
DN 99051053

TI Protein targeting in the analysis of learning and memory: a potential alternative to gene targeting.

AU Gerlai R; Williams S P; Cairns B; Van Bruggen N; Moran P; Shih A; Caras

I;

Sauer H; Phillips H S; Winslow J W
CS Neuroscience Department, Genentech, Inc., South San Francisco, CA
94080-4990, USA.. gerlai@gene.com

SO EXPERIMENTAL BRAIN RESEARCH, (1998 Nov) 123 (1-2) 24-35.
Journal code: EP2. ISSN: 0014-4819.

CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199904

EW 19990402

AB Gene targeting using homologous recombination in embryonic stem (ES) cells

offers unprecedented precision with which one may manipulate single genes and investigate the *in vivo* effects of defined mutations in the mouse. Geneticists argue that this technique abrogates the lack of highly specific pharmacological tools in the study of brain function and behavior. However, by now it has become clear that gene targeting has

some

limitations too. One problem is spatial and temporal specificity of the generated mutation, which may appear in multiple brain regions or even in other organs and may also be present throughout development, giving rise to complex, secondary phenotypical alterations. This may be a

disadvantage

in the functional analysis of a number of genes associated with learning and memory processes. For example, several proteins, including

neurotrophins--cell adhesion molecules--and protein kinases, that play a significant developmental role have recently been suggested to be also involved in **neural** and behavioral plasticity. Knocking out genes of such proteins may lead to developmental alterations or even embryonic lethality in the mouse, making it difficult to study their function in **neural** plasticity, learning, and memory. Therefore, alternative strategies to gene targeting may be needed. Here, we suggest

a

potentially useful *in vivo* strategy based on systemic application of **immunoadhesins**, genetically engineered fusion proteins possessing the Fc portion of the human IgG molecule and, for example, a binding domain of a receptor of interest. These proteins are stable *in vivo* and exhibit high binding specificity and affinity for the endogenous ligand

of

the receptor, but lack the ability to signal. Thus, if delivered to the brain, **immunoadhesins** may specifically block signalling of the receptor of interest. Using osmotic minipumps, the protein can be infused in a localized region of the brain for a specified period of time (days

or

weeks). Thus, the location and timing of delivery are controlled. Here,

we

present methodological details of this novel approach and argue that infusion of **immunoadhesins** will be useful for studying the role particular receptors play in behavioral and **neural** plasticity.

L7 ANSWER 3 OF 5 MEDLINE
AN 97399692 MEDLINE
DN 97399692
TI Direct demonstration of MuSK involvement in acetylcholine receptor clustering through identification of agonist ScFv [see comments].
CM Comment in: Nat Biotechnol 1997 Aug;15(8):721-2
AU Xie M H; Yuan J; Adams C; Gurney A
CS Department of Molecular Biology, Genentech, Inc., San Francisco, CA
94080,
USA.
SO NATURE BIOTECHNOLOGY, (1997 Aug) 15 (8) 768-71.
Journal code: CQ3. ISSN: 1087-0156.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199712
EW 19971203
AB MuSK is a tyrosine kinase localized to the postsynaptic surface of the neuromuscular junction. We have searched for modulators of MuSK function using a library of human single chain variable region antibodies (scFv) that can be displayed on M13 phage or expressed as soluble protein.
A panel of 21 independent MuSK-specific scFv, identified in a screen for binding to MuSK-Fc **immunoadhesin**, were examined for ability to induce proliferation in a factor dependent cell line (Ba/F3) through a chimeric receptor, MuSK-Mpl. Four of the scFv induced a proliferative response, suggesting an ability to induce dimerization of MuSK. These scFv were also able to induce tyrosine phosphorylation of full-length MuSK and retained this ability when re-engineered to be expressed as authentic (and dimeric) human IgG molecules. Addition of agonist scFv to a cultured myotube cell line induced AChR clustering and tyrosine phosphorylation. These results provide direct evidence that MuSK activation is capable of triggering a key event in **neuromuscular** junction formation and further demonstrate that large libraries of phage-displayed scFv provide a robust method for generating highly specific agonist agents.

L7 ANSWER 4 OF 5 MEDLINE

AN 97231286 MEDLINE

DN 97231286

TI A paracrine effect for **neuron**-derived BDNF in development of dorsal root ganglia: stimulation of Schwann cell myelin protein expression

by glial cells.

AU Pruginin-Bluger M; Shelton D L; Kalcheim C

CS Department of Anatomy and Cell Biology, Hebrew University-Hadassah Medical School, Jerusalem, Israel.

SO MECHANISMS OF DEVELOPMENT, (1997 Jan) 61 (1-2) 99-111.
Journal code: AXF. ISSN: 0925-4773.

CY Ireland

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199707

EW 19970705

AB Addition of **neurons** to cultures of non-**neuronal** cells derived from quail embryonic dorsal root ganglia causes a 2.5-fold increase in the proportion of cells that express the glial marker Schwann cell myelin protein (SMP) when compared to cultures devoid of **neurons**. This effect is mediated by BDNF because incubation with a **trkB immunoadhesin** that sequesters BDNF, but not with **trkA** or **trkC immunoadhesins**, abolishes this stimulation. This **neuronal** activity can be mimicked by treatment with soluble BDNF that stimulates specifically the conversion of SMP-negative glial cells into cells that express this phenotype. That BDNF is the endogenous **neuron**-derived factor affecting glial development is further supported by the observation that BDNF is extensively expressed in developing sensory **neurons** of the avian ganglia both *in vivo* and *in vitro*, but not by the satellite cells. These results show for the

first

time a paracrine role for **neuronal** BDNF on differentiation of peripheral glial cells. This effect of BDNF is likely to be mediated by the p75 **neurotrophin** receptor because: (1) p75 immunoreactive protein is expressed by a subset of satellite cells; (2) neutralization

of

p75 abolishes the BDNF-induced stimulation; (3) a treatment of non-**neuronal** cell cultures with equimolar concentrations of either soluble NGF or NT-3 also affects the proportion of cells that become SMP-positive. Whereas NGF stimulates the acquisition of this glial

antigen

to a similar extent as BDNF, NT-3 inhibits its expression, suggesting

that

distinct **neurotrophins** signal differentially through p75. These findings also suggest that the definitive phenotype of peripheral glia is determined by a balance between positive and inhibitory signals arising

in

adjacent **neurons**.

L7 ANSWER 5 OF 5 MEDLINE

AN 95123473 MEDLINE

DN 95123473

TI Human trks: molecular cloning, tissue distribution, and expression of extracellular domain **immunoadhesins**.

AU Shelton D L; Sutherland J; Gripp J; Camerato T; Armanini M P; Phillips H S; Carroll K; Spencer S D; Levinson A D

CS Department of Neuroscience, Genentech, Inc., South San Francisco, California 94080.

SO JOURNAL OF NEUROSCIENCE, (1995 Jan) 15 (1 Pt 2) 477-91.
Journal code: JDF. ISSN: 0270-6474.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)